

Remarks

Claim Rejections – 35 USC § 101

The Applicant gratefully notes the Examiner's withdrawal of the previously issued rejection under 35 USC 101.

Claim Rejections – 35 USC § 103

Pending claims 1-9, 18, 20 and 22 stand rejected under 35 USC 103(a), as being unpatentable over Sciacca (US 6,760,761) in view of Thompson et al. (US 6,189,038). This rejection is traversed in light of the following remarks.

The Applicant is grateful for the Examiner's Response to Arguments. However, the Applicant feels that the Examiner has not addressed the most fundamental point made in the arguments filed September 22, 2009.

This fundamental point is that Sciacca teaches a standardized (that is, fixed) interface to solve the problem of interoperability, whereas the presently claimed invention provides an adaptive software interface. By generating an adaptive interface, the present invention therefore represents a solution that is directly contrary to the approach taken in the prior art (that is, both Sciacca and Thompson).

There is clear evidence for this conclusion. In Sciacca, col.1, lines 7-10, it is explicitly stated that the goal is to "standardize an interface" (see also col.11, lines 10-13). This is achieved by providing a device manager 110 (Figs. 1 and 3), which acts as an intermediary between the managed devices and the remote devices which wish to configure them. Instead of interacting directly with the interface of each individual managed device, the remote devices use the device manager 110, which presents a standardized interface (see col.1, lines 30-33). The device manager 110 configures/manages each managed device, using that managed device's native

interface, on behalf of the remote devices. There is no generation of an adaptive interface: merely translation from one fixed native interface to another fixed standardized interface.

There are perhaps two key misconceptions that have led the Examiner to reach the opposite conclusion:

1. The Examiner believes that Sciacca discloses the collection of meta-data describing the semantics of interfaces for the client-end devices (as well as the remote devices), which is then stored in the configuration database. In the response to arguments, the Examiner cites col.5, lines 41-52 of Sciacca as basis for this belief.

In fact, this cited passage describes the input inspection engine 450 of the device configuration database 310. This engine “validates inputs from external entities”. For example, it may perform checks to ensure that invalid data is not entered by an operator into the configuration database 420. Note that the data input into and stored in the configuration database is “configuration data corresponding to one or more managed devices” (col.5, lines 3-4). Since the data pertains to the managed devices, it is clearly not meta-data describing the interface of the client-end (remote) device. Therefore (as explained in the previous response) Sciacca does not disclose generating, collating, or analyzing metadata describing the interface capabilities of the remote devices.

2. The Examiner appears to confuse the adjustment of device configurations with the generation of an interface. At p.3 of the present action, it is implied that Sciacca discloses generating an adaptive software interface because Sciacca “teaches the adjustment of device configurations so that they can comply with the needs of the infrastructure (in other words, so that they can communicate with the other network devices)”.

Firstly, it is incorrect to equate “complying with the needs of the infrastructure” with “communicating with other network devices”. The device configurations are not adjusted

to ensure an ability to communicate with other devices – there is no basis for this interpretation. They are adjusted to meet a given management policy (col.6, lines 13-22).

In any case, it is wrong to equate adjustment of a device's configuration (as in Sciacca) with the generation of an adaptive software interface which enables two entities to communicate (as in the present application). The configuration of a device (what it does; how it behaves) can change despite the software interface (the syntax and semantics of inputs or outputs – such as the command set) of the device remaining the same. This is true in Sciacca, where the configuration is adjusted by means of fixed interfaces. Sciacca contemplates the use of standard interfaces such as CORBA (col.4, line 66 to col.5, line 2 and col.9, lines 61-63) for communication between the remote devices and the device manager, and between the device manager and the managed devices, respectively. In the alternative, Sciacca also notes that the interfaces to the managed devices can be proprietary. Neither possibility anticipates an adaptive (that is, changeable, variable) interface.

Again, it is repeated that the whole purpose of the device manager of Sciacca is to avoid the need to adapt software interfaces, by providing an intermediary with a standardized interface to moderate between the fixed interfaces of various devices.

As also explained in the previous response, Thompson does nothing to remedy the deficiencies of Sciacca, because it follows the same approach of mediating (translating) between various fixed interfaces, as opposed to generating an interface adaptively, as in the present invention.

For all these reasons, the Applicant submits that the invention of claim 1 is patentable over Sciacca and Thompson, in isolation or in combination.

Claim 20 recites similar technical features to claim 1. The Applicant submits that it is therefore patentable for the same reasons.

Claim 8 is directed to a method of determining a behavioral characteristic of a first entity in a relationship with at least one other entity. This requires the steps of “generating meta-data providing a structure containing at least one semantic information element describing a characteristic of an interface capability” for both the first entity and the at least one other entity. As discussed above, Sciacca discloses generating meta-data for at most one of two entities that wish to communicate.

Since the step of generating meta-data for a second entity is not disclosed, Sciacca cannot disclose the remaining steps of claim 8 – namely, collating the semantic information elements of one entity with the other; and analyzing the collated pairs to determine a behavioral characteristic.

As discussed above for claim 1, the approach of Sciacca is to provide a central intermediary with a single, standardized interface. This teaches away from the solution of generating, collating and analyzing metadata as claimed in claim 8. Sciacca has no need to determine behavioral characteristics, because these characteristics are fixed on both sides of the intermediary – on the one side by the single, standardized interface; and on the other side by the multiple device-specific command sets. Thompson confirms this approach.

Claim 8 is therefore non-obvious in light of these references, for similar reasons to claim 1.

Likewise, claim 18 requires “generating at least one meta-data structure providing at least one semantic information element for each entity” (an initiator and a responder), followed by collating corresponding semantic information elements and analyzing them to determine the extent to which the initiator and the responder can generate a compatible interface. In accordance with this analysis, an interface is generated between said initiator and said responder which enables them to communicate across the network despite the fact that the interface capabilities of the entities are different.

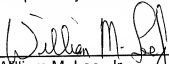
As discussed above for claim 1, Sciacca discloses none of these steps. On the contrary, it teaches an approach that is fundamentally different – standardizing a fixed interface and providing an intermediary to map from the standard form to the device-specific form. Thompson takes the same approach. Claim 18 is therefore non-obvious, from Sciacca and Thompson, for similar reasons to claim 1.

The remaining dependent claims are submitted to be allowable at least by virtue of their dependence from an allowable independent claim.

In view of the fact that all of the Examiner's comments have been addressed, further and favorable reconsideration is respectfully requested.

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Respectfully submitted,



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